

REMARKS

The Examiner is thanked for the Official Action dated December 3, 2002. The above amendment and remarks to follow are intended to be fully responsive thereto.

The Examiner asserts that the application does not contain a declaration for a patent. The Examiner is directed to the response to the notice to file missing parts filed October 23, 2001 containing the declaration. For the convenience of the Examiner a copy of the filed declaration is attached hereto.

The specification and abstract was objected to for minor informalities. The specification and abstract have been amended in accordance with the Examiner's comments. No new matter has been added.

Claims 1-14 were rejected under 35 U.S.C. 112 second paragraph for indefinite language. Claims 1, 3-11, and 13 have been amended in accordance with the Examiner's comments and are now believed to conform to 35 U.S.C. 112.

Claims 1-2, 4, 6-7, 9 and 11-13 were rejected under 35 U.S.C. 102(b) as being anticipate by Jacob et al. 5,675,205. Claims 3, 5 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jacob, et al. in view of Jaeschke 4,4 69,968. Claim 8 was

rejected under 35 U.S.C. 103(a) as being unpatentable over Jacob, et al. in view of Kato 5,536,972. Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Jacob, et al. in view of Nakata, et al. 4,990,811. Applicant respectfully disagrees.

Regarding claim 1, contrary to the prior art, the metallic seat of the present invention is not in contact with the housing. Rather the seat is mounted within the thickness of the support. The recited seat does not constitute any part of the housing. This arrangement prevents the transmission of heat from the housing to the dissipator. The prior art fails to disclose such a seat disposed within the thickness of the support. Jacob, et al. discloses a seat 14 at ground potential via the housing flange 9 so that the seat is in contact with the housing. Furthermore, according to the present invention, the dissipator does not constitute the housing and the seat is mounted inside the support so that the transmission of heat is avoided from the housing to the dissipator.

Regarding claim 3, Jacob's, et al fails to disclose a dissipator having a coefficient of expansion greater than that of the seat. Conventionally, housings of such devices are made of aluminum. In Jacob, et al. seat 14 is also made of aluminum and therefore, does not disclose a different coefficient of expansion.

Regarding claim 10, Jaesche, the holder 56 is not provided with a semiconductor control component mounted on a metallic seat.

The drum 25 does not form a part of the brush holder. Jaesche relates to an electromagnetic or dynamo -electric coupling device and not an alternator. Furthermore, drum 25 does not carry a stator.

Regarding claim 13, Nakata relates to a motor and not an alternator. In an alternator, the housing carries on the inside a multiphase wound stator which is a source of heat. The transmission of heat is avoided from the housing to the dissipator via the screw. In Nakato, the spacers 36 are interposed between the insulator plate 28 and the bracket 18 and not between the screw and dissipator. The prior art does not disclose all the limitation or the proper motivation to support the Examiner's modification. Thus any rejection of claim 10 or 13 under 35 U.S.C. 103 is improper.

Claims 1, 3-11, and 13 are not believed to be in condition for allowance and notice to that effect is earnestly solicited.

Should the Examiner believe further discussion regarding the above claim language would expedite prosecution, he is invited to contact the undersigned at the number listed below.

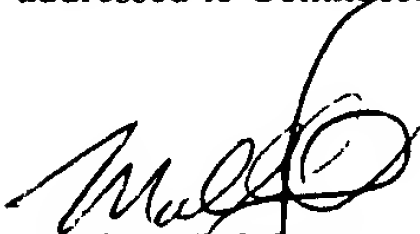
Respectfully submitted:

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I hereby certify that this correspondence is being deposited with the United States postal Service as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington D.C. 20231, On June 3, 2002

 6/3/02  
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In re application of:

VANDENBOSSCHE, M.

Serial No.: 09/583,583

Examiner: PEREZ, G.

Filed: August 24, 2001

Group Art Unit: 2834

Title: BRUSH HOLDER WITH A CONTROL COMPONENT FOR A MOTOR VEHICLE  
ALTERNATOR

**APPENDIX Indicating Changes Made**

**IN THE SPECIFICATION**

Please insert the following heading before the first full paragraph on page 1 as follows:

**BACKGROUND OF THE INVENTION**

**1. Field of the Invention.**

Please insert the following heading between the first and second paragraphs between lines 3-4 on page 1 as follows:

**1. Description of the Related Art.**

Please insert the following heading before the first paragraph on page 2 as follows:

### SUMMARY OF THE INVENTION

Please insert the following heading between the fifth and sixth paragraphs between lines 14-15 on page 6 as follows:

### BRIEF DESCRIPTION OF THE DRAWINGS

Please insert the following heading between the third and fourth paragraphs between lines 6-7 on page 7 as follows.

### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please amend the second paragraph on page 12 as follows.

Figure 5 illustrates a second embodiment. In this, the support 4 is again moulded onto seat 14, which here has a flat shape. The seat carries the component 12 by means of a layer of thermally conductive glue 30. The dissipator 26 here has an essentially flat shape. It is fixed to the support 4, parallel to it. The dissipator 26 has a protuberance 32 extending with clearance in the opening 22 and having a flat end face coming into surface contact with the face of the seat 14 opposite to the component 12, which is directed towards the machine. The machine

has fixing screws 34 each passing through an orifice in the dissipator 26, an orifice in the support 4 and an orifice in a bearing 36 of the machine housing. Thus the same screws 34 provide the fixing of the dissipator 26 to the support 4 and the fixing of the support 4 to the machine 3.

### IN THE ABSTRACT

Please amend the Abstract on page 18 as follows.

[The brush holder (2) for a vehicle electrical machine, having;

- an insulating support
- an electrical circuit comprising a semiconductor control component (12); and

at least one metallic heat dissipation means (14, 26) in contact with the ambient environment and arranged to receive heat from the control component (12), the dissipation means (14, 26) is composed of two distinct part, namely a seat (14) and a dissipator, the seat being fixed to the support and receiving on one of its faces the control component and on the other one of its faces the dissipator (26).

(Figure 4)]

A brush holder for a vehicle electrical machine having an insulating support, an electrical circuit including a semiconductor control component; and at least one metallic heat dissipation member in contact with the ambient environment and arranged to receive heat from the control component. The dissipation member is composed of two distinct parts, a seat and a dissipator. The, the seat is fixed to the support and receiving on one of its faces the control component and on the other one of its faces the dissipator.





IN THE CLAIMS

Please cancel claims 2, 12 and 14.

Please amend claims 1 and 3-11, and 13 as follows.

1. Brush holder (2) for a vehicle[electrical machine] alternator  
[having] comprising:

an insulating support (4) having an opening (22);

a heat dissipating means (14, 26) havinga metallic seat fixed  
to the support (4);

and an electrical circuit comprising a semiconductor control  
component (12), in which the seat (14) on the one hand receives  
for fixing on one of its faces the control component (12) by  
means of an opening (22) in the support (4) and on the other  
hand belongs to the heat dissipation means (14, 26) in contact  
with [the] an ambient environment and arranged so as to receive  
heat from the control component (12), [characterised in that]  
wherein the seat is mounted within a thickness of the support  
(4) and the seat receives on the other of its faces a heat  
dissipator so that the heat dissipation means (14, 26) is  
composed of two distinct and adjacent parts.

3. Brush holder according to claim 2, [characterized in that]

wherein the dissipator (26) has a coefficient of expansion greater than that of the seat.

4. Brush holder according to claim 1, [characterized in that] wherein the support (4) is moulded onto the seat (14).

5. Brush holder according to claim 2, [characterized in that] wherein the support (4) is moulded onto the dissipator (14, 26).

6. Brush holder according to claim 1, [characterized in that] wherein the dissipator (26) is attached to the support (14).

7. Brush holder according to claim 6, [characterized in that] wherein the dissipator (26) is fixed to the support (4) by screws (34).

8. Brush holder according to claim 1, [characterized in that] wherein it comprises a heat -conducting layer (30) interposed between the seat (14) and the dissipator.

9. Brush holder according to claim 1, [characterized in that] wherein the seat (14) and the dissipator (26) are in direct contact.

10. Brush holder according to claim 9, [characterized in that] wherein at least one (14) from amongst the seat (14) and dissipator (26) has projecting reliefs (38) able to enter the material of the other one (26) from amongst [the] a base and dissipator when they are placed in the operating position of the brush holder.

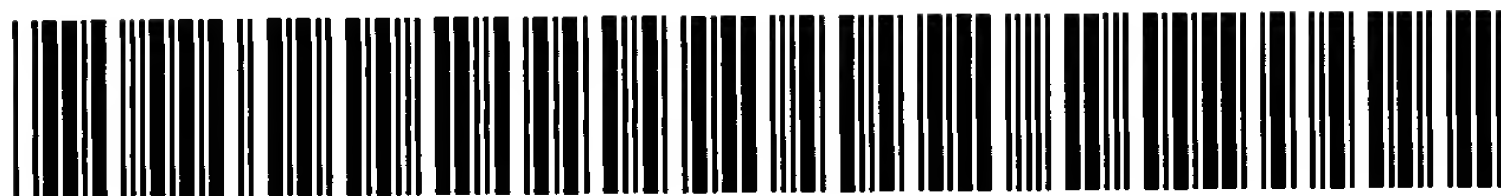
11. Brush holder according to claim 1, [characterized in that] wherein the dissipator (26) is metallic.

13. Vehicle [electrical machine (3) characterized in that it comprises] alternator, comprising: a brush holder according to claim 7, [the or] at least one of the screws (34) for mounting the dissipator (26) on the support (4) providing the fixing of the brush holder (2) to a housing of the machine, and a thermally insulating element (37) is interposed between the or each screw (34) and the dissipator (36).

# ABSTRACT

A brush holder for a vehicle electrical machine having an insulating support, an electrical circuit including a semiconductor control component; and at least one metallic heat dissipation member in contact with the ambient environment and arranged to receive heat from the control component. The dissipation member is composed of two distinct parts, a seat and a dissipator. The, the seat is fixed to the support and receiving on one of its faces the control component and on the other one of its faces the dissipator.

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